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# Pre-Consultation Paper on Set Top Box Interoperability

## Telecom Regulatory Authority of India (TRAI)

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**Response to Request for Proposal**

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# 1. Infosys Response

## 1.1 In your opinion, what are the concerns that should be taken care of at the time of development of framework of interoperable of STBs?

The set-top box inter-operability is a much needed step to make it more pro customer by empowering the customer. That said however following points need to be debated to ensure that inter-operability creates value for every stakeholder.

1. Need of inter-operability among various access technologies need to debated and evaluated for value generated. To set-up inter-operability among various access technologies Cable/D2H/IP may require significant research and development cost followed by higher production cost.
2. The intuitive user interface and allied services being provided by the MSO/D2H operator are key elements of the service provided by MSO/D2H and act as point of differentiation. Inter-operability framework need to define the approach or bring more clarity on these points
    a. Is user interface and other services being provided by MSO/D2H operators need to supported by the inter-operable set-top boxes
    b. Is the inter-operability limited just to the broadcast of availed channels; the user interface and presentation may be governed by the set-top box manufacturer. Making user interface and presentation in purview of set-top box manufacturer would incentivize innovation and regional presentation
3. While MSO's lead the Phase 1 and Phase 2 of digitization due to existent customer base, cable network and lower priced base packages; D2H operators are positioned more favorably for the phase 3 and phase 4 due lack of strong existent network of MSO's. But to make most of this opportunity D2H operators need to adopt light service model with lower base packs and lower acquisition cost as the target customer base in Phase 3 and Phase 4 is very price sensitive. In such scenario the loss of leasing revenue may hamper their capability to offer cheap base packs affecting the pace of digitalization

The framework of interoperability of STB should bring into perspective not only just as a means of providing customer an exit option from incumbent service provider but technology innovation in this sector and broader adoption of the same. Therefore, following aspect should also take into consideration while drafting the framework of interoperable of STBs

i. Pricing of switching for customer and transparency on charges of all related matters
ii. Security
iii. Transmission efficiency & Cost of STB
iv. On ground feasibility for interoperability
v. User experience and enhanced user support with SLAs
vi. Provision for Value added services like Video on demand, Internet access / Browser / other internet enabled services etc.

While formulating the framework it should will be necessary to consider the following as a foundation for it:

- Ensure that decision of migration to new technology should be voluntary from customer side.

- Nominal migration fee to cover administrative costs
- Ensure Healthy Competition among operators
- Sustainability of operators
- Incentives for Migration

## 1.2 What are the techno-commercial reasons for non-interoperability of STBs other than those mentioned above? Please provide reasons with full details.

Consumers value after sales service from trusted service providers. Currently MSO's/D2H operator act as single touch point for all kind of service related issues aligned with TRAI 2013 Standard Tariff Package consultation paper; in which the onus of providing set-top box service was with D2H service provider; and it was proposed to be free for initial three years.

In case the set-top box are available as white label in market the onus of service of set-top box would shift to equipment manufacturer increasing the number of touch-points for the customer in case of service failure. This hassle of managing multiple touch point and lack of end to end ownership may act as deterrent in fueling the growth of white label boxes.

The customer may still prefer to go with complete solution from single service provider. In case these inter-operable boxes are also leased by MSO/D2H operators will service commitment also shift from one MSO to another?

The basic premise of interoperability is to provide wider choice to customer and customers may continue to get support. Such products should be capable to receive DTH/Cable content and able to label its basic and additional capabilities so that customers have a choice of selecting the right one which can work across operators for the basic services and allow standard platforms to provide VAS.

Multiple technical factors affect the choice of software & hardware design of the box provided by any DTH platform. It is not possible to upgrade STB box to support all the above factors in the current set up

Interoperability should ideally work across different levels of software, if the same experience has to be made available for the consumer when he/she switches from one operator to another. Applications like compression, middleware, Customer information, Messaging, VAS services are host device specific and there is no interoperability standard to define them. Therefore, reducing the features in STB to common minimum, will result in losing the enhanced user experience / remote customer support etc.

Specification for hardware and software on the host device terminal will inhibits the spirit of technical innovation in the longer run for STB space. Also, as it had seen in the past regulations generally lags in terms of innovation.

Higher end services may include software features that are proprietary to the operator or product manufacturer. E.g. multi-screen, VoD, etc, Mandating a specific interface for a spec may just add a dead piece of hardware at a higher cost both for the operator and the

consumer. As consumer will be forced to buy that product even though that is not as per his/her requirement.

***Technology prevalent***: Apart from that, technical interoperability is possible only by way of CAM and authorized card from respective operator. But this seems to be economically not feasible, as on date the customer will have to bear almost the same cost for using a CAM module as it would have to by licensing a new box from the other operator.

Even with an open architecture based STB, it is not possible to make it work without CAM module, unless access software for each operator is provided in the STB for decoding. But, with this provision price of STB will be much higher which makes it economical unviable and this defeat the purpose of interoperability.

**Other platforms:** Also, STB is not the only medium available to customer to view TV but other medium like IPTV are also there and which is gaining market share quite substantially and therefore, can't be ignored. In this interoperability will not make much sense here keeping in mind limited technical and economic viability.

## 1.3 What are the plausible solutions for technical interoperability of STBs and their impact on the sector growth?

Technical Solution which are available as of now for interoperability are on the hardware side. Therefore, if TRAI set up a technical committee which along with operator frame a software based technical roadmap for STB which can be viable both technical and economical for the industry and consumers. This will give the chance to the industry to gear up for the technical advancement and also give the consumers to explore the options in terms of its choice and technology options available like STB, IPTV, and OTT etc.

This will help the sector keep the a pace with technical advancement and remain ahead of curve in terms of offerings which will be same across the operator but will differentiated based on services rather than technology which is big drag for sector not only but will have bigger impact in the future.

## 1.4 Any other issue which you feel will be relevant for development of technical interoperability of the set top boxes.

While different approaches are discussed in the paper ; TRAI must not limit to just solving the immediate issue but also take in account how TV viewing may change to Virtual Multichannel Video Programming Distributor (VMPVD) with software emerging as new hardware as streaming and content consumption would be all driven by software defined interfaces (OTT's/API's).

This is a much-needed step in the right direction. Many subscribers are currently stuck with their DTH service providers simply because they have invested in set-top boxes and do not wish to re-invest in buying new ones with the new service provider. This will facilitate the reuse of such set-top boxes and prevent them from turning into junk.

Keeping in mind full interoperability TRAI should think of mandating white label STB and then left it to customer to choose the operator(s) as per his choose of channels on “pay as go” or “fixed amount subscription”. This will create more competition and give more power in the hands of customer to choose the best out of them. This will also force the operator to make their services offering and other services more customer centric rather than twist and turn the customer in their own way. If they fail to do it, they know customer will shut them off in just few clicks.

This will be huge tasks but TRAI should recommend to Operators to give their services at par both in terms of technology and commercial offering. Important point for TRAI is keep customer interest above all by keeping transition fees as low as possible and giving them power to choose the best among the players by making the industry techno-commercial landscape competitive, meaningful and relevant enough which force the player to provide best of offers and technology.

This will bring out the best for customer and beneficial for the Industry as well.